CALS TEST NETWORK

AFCTN TEST REPORT 93-044

AFCTB-ID 92-076

Technical Raster Transfer

Using:

ASC/YIL & Cubic Defense Systems' Data

MIL-R-28002A (Raster)

Quick Short Test Report

29 October 1992

Prepared for

Electronic Systems Center

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93-044

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29 October 1992

Prepared By
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Contents

1. Introduction

1.1 Background

The Department of Defense (DoD) Air Force Continuous Acquisition and Life-Cycle Support (CALS) Test Network (AFCTN) is conducting tests of the military standard for the Automated Interchange of Technical Information, MIL-STD-1840A, and its companion suite of military specifications. The AFCTN is a DoD sponsored confederation of voluntary participants from industry and government managed by the Electronic Systems Center (ESC).

The primary objective of the AFCTN is to evaluate the effectiveness of the CALS standards for technical data interchange and to demonstrate the technical capabilities and operational suitability of those standards. Two general categories of tests are performed to evaluate the standards; formal and informal.

Formal tests are large and comprehensive, which follow a written test plan, require specific authorization from the DoD, and may take months to prepare, execute, and report.

Informal tests are quick and short, used by the AFCTN technical staff, to broaden the testing base. They include representative samples of the many systems and applications used by AFCTN participants. They also allow the AFCTN staff to gain feedback from many industry and government interpretations of the standards, to increase the base of participation in the CALS initiative, and respond to the many requests for help that come from participants. Participants take part voluntarily, benefit by receiving an evaluation of their latest implementation (interpretation) of the standards, interact with the AFCTN technical staff, gain experience using the standards, and develop increased confidence in them. The results of informal tests are reported in Quick Short Test Reports (QSTR) that briefly summarize the standard(s) tested, the hardware and software used, the nature of the test, and the results.

1.2 Purpose

The purpose of the informal test, reported in this QSTR, was to analyze Cubic Defense Systems' interpretation and use of the CALS standards in transferring CALS Raster data. Cubic used its CALS Technical Data Interchange System to produce data, in accordance with the standards, and delivered it to ASC/YIL and the AFCTN technical staff on a 9-track magnetic tape.

2. Test Parameters

Test Plan: AFCTB 92-076

Date of Evaluation: 29 October 1992

Evaluator:
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Air Force CALS Test Bed
DET 2 HQ ESC/ENCP
4027 Colonel Glenn Hwy
Suite 300
Dayton, OH 45431-1672

Data Originator:
Jay Aronson
ASC/YIL
Eglin AFB, FL 32545-5000

Cliff Crane
Cubic Defense Systems
9333 Balboa Ave
P.O. Box 85587
San Diego, CA 92186-5587

Data Description: Raster Transfer Test
1 Document Declaration file
4 Raster files

Data Source System:

Raster

HARDWARE
Unknown

SOFTWARE
Unknown

Evaluation Tools Used:

MIL-STD-1840A (TAPE)

SUN 3/280

AFCTN *Tapetool v1.2.8 UNIX*

XSoft *CAPS/CALS v40.4*

MIL-R-28002 (Raster)

SUN SparcStation 2

AFCTN *validg4*

AFCTN *calstb.475*

Cheetah

Inset Systems *HiJaak v2.02*

Corel *Ventura Publisher*

Standards Tested:

MIL-STD-1840A

MIL-R-28002A

3. 1840A Analysis

3.1 External Packaging

The tape arrived at the Air Force CALS Test Bed (AFCTB) enclosed in an envelope. This was not in accordance with ASTM D 3951 requirements. The exterior of the envelope was not marked with the magnetic tape warning label, as required by MIL-STD-1840A, para. 5.3.1.3.

The tape was not enclosed in a barrier bag or barrier sheet material, as required by MIL-STD-1840A, para. 5.3.1.2. Inspection of the tape reel showed the label indicating the recording density, as required by MIL-STD-1840A, para. 5.3.1. A packing list, showing all files recorded on the tape, was not included.

3.2 Transmission Envelope

The 9-track tape received by the AFCTB contained MIL-STD-1840A files. The files were named per the standard conventions.

3.2.1 Tape Formats

The tape was run through the AFCTN *Tapetool v1.2.8* utility. Twelve errors and one note were encountered while evaluating the contents of the tape labels. The errors were of three types, and repeated during the evaluation.

The first reported error was an Invalid Record Control Word. This was reported with the D001 file HDR1 marker. This error and note occurred only one time.

```
*** I/O ERROR - Invalid Record Control Word encountered.
    Record Control Word contained an invalid record length.
    Record Control Word string =>
*** NOTE - Remainder of file will be skipped.
```

The next reported error related to data in the HDR and EOF markers not being the same. The creation date is different in the HDR1 and EOF1 records. Part of this log file is shown below. This error was reported in all files.

```
HDR1D001              CALS0100010001000000 92250 00000 000000

  Generation Number: 0000
  Generation Version Number: 00
  Creation Date:  92250
  Expiration Date:  00000

                  <<<<< PART OF LOG REMOVED HERE >>>>>

EOF1D001              CALS0100010001000000 92199 00000 000001

  Generation Number: 0000
  Generation Version Number: 00
  Creation Date:  92199
  Expiration Date:  00000

*** ERROR (ANSI X3.27; 8.8.1) - The contents of the fields in the
    EOF1 Label should equal the contents of the fields in the
    HDR1 Label (except for the Block Count field).
```

The third error related to an invalid file sequence number. Each file in the set should increase by one. All files in this set retain the number 0001.

```
  Label Identifier: HDR1
  File Identifier: D001R001
  File Set Identifier: CALS01
  File Section Number: 0001
  File Sequence Number: 0001
  Generation Number: 0000
  Generation Version Number: 00
  Creation Date:  92238
  Expiration Date:  00000
  File Accessibility:
  Block Count: 000000
  Implementation Identifier:

*** ERROR (ANSI X3.27; 6.5.2) - Invalid file sequence number.
    File sequence numbers should increase by 1 for each file.
```

```
    Previous = 1; Expected = 2; Actual = 1
```

The next set of errors occurred when *Tapetool* encountered a Raster file D002R001. This file was either miss named or if a second file set was to be included no document declaration file was inserted. Based on the file count record in the Document Declaration file, a total of 30 Raster files were included.

```
*** ERROR (MIL-STD-1840A; 5.1) - Unexpected Raster
    File encountered.
*** NOTE - Document Declaration Files should precede all other files.
*** ERROR (MIL-STD-1840A; 5.1) - Document Declaration file D002 missing.
*** NOTE - Document Declaration files should precede all other files.
```

When the tape was read by XSoft *CAPS read1840A* utility, it encountered an error on the first file and terminated.

The basic tape construction does not meet the CALS MIL-STD-1840A requirements.

3.2.2 Declaration and Header Fields

The Document Declaration file contained many errors. They are shown below. It was noted that the total file count was suppose to be 30 Raster images. The missed named file D002R001 caused *Tapetool* to stop processing the tape.

```
srcsys: CUBIC DEFENSE SYSTEMS INC. 9333 BALBOA AVE. SAN DIEGO, CA 92186     CAGE 94987
srcdocid: 129203
srcrelid: NONE
chglvl: B
*** ERROR (MIL-STD-1840A; 5.1.1.2) - Invalid change level encountered.
*** NOTE (MIL-STD-1840A; 5.1.1.2) - Change level should be the word ORIGINAL or
    a Revision Number followed by a Change Level Number followed by
    a Change Level Date. They should be separated by a comma or space.
dteisu: SEE DWG
*** ERROR (MIL-STD-1840A; 5.1.1.2) - Invalid date format encountered.
*** NOTE (MIL-STD-1840A; 5.1.1.2) - Date Format shall be a four digit year
    followed by a two digit month followed by a two digit day.
dstsys: YIEC OO-ALC
```

```
dstdocid: NONE
dstrelid: NONE
dtetrn: 19920717
dlvacc: A011R,E010R0
ilcnt: R30
*** ERROR (MIL-STD-1840A; 5.1.1.2) - Invalid Document Declaration header;
    field name.  Expected => filcnt:
*** NOTE - The value in the header field may not be evaluated.
*** NOTE - Correction made in new %s Header File.
tlcls: UNCLASS0
*** ERROR (MIL-STD-1840A; 5.1.1.2) - Invalid Document Declaration header;
    field name.  Expected => ttlcls:
*** NOTE - The value in the header field may not be evaluated.
*** NOTE - Correction made in new %s Header File.
occls: UNCLASS0
*** ERROR (MIL-STD-1840A; 5.1.1.2) - Invalid Document Declaration header;
    field name.  Expected => doccls:
*** NOTE - The value in the header field may not be evaluated.
*** NOTE - Correction made in new %s Header File.
octyp: DL0
*** ERROR (MIL-STD-1840A; 5.1.1.2) - Invalid Document Declaration header;
    field name.  Expected => doctyp:
*** NOTE - The value in the header field may not be evaluated.
*** NOTE - Correction made in new %s Header File.
octtl: AIRCRAFT INSTRUMENTATION SUBSYSTEM
*** ERROR (MIL-STD-1840A; 5.1.1.2) - Invalid Document Declaration header;
    field name.  Expected => docttl:
*** NOTE - The value in the header field may not be evaluated.
*** NOTE - Correction made in new %s Header File.
```

The Raster files reported four errors and five notes. The first Raster header is shown below.

```
srcdocid:   247820          94987                  00010001UMEEHN
*** ERROR (MIL-STD-1840A; 5.1.4) - Value contains leading spaces.
*** NOTE - Correction made in new %s Header File.
dstdocid: NONE
txtfilid: NONE
figid: NONE
srcgph: NONE
doccls: NONE
rtype: 1
rorient: 000,270
rpelcnt: 26880,6912
*** ERROR (MIL-STD-1840A; 5.1.4.4) - Value for pel path pels was not a
```

```
    zero-filled six character number.
*** ERROR (MIL-STD-1840A; 5.1.4.4) - Value for progression lines was not a
    zero-filled six character number.
*** NOTE - The header record will be given the value 026880,006912.
*** NOTE - Correction made in new %s Header File.
rdensty: 200
*** ERROR (MIL-STD-1840A; 5.1.4.4) - Value for Raster density was not a
    zero-filled four character number.
*** NOTE - The header record will be given the value 0200.
*** NOTE - Correction made in new %s Header File.
notes: NONE

4 error(s), 0 warning(s), and 5 note(s) were encountered
 in Raster File D001R001.
```

The errors in the Document Declaration file and data header records prevents this portion of the tape from meeting the CALS MIL-STD-1840A requirements.

4. IGES Analysis

No Initial Graphics Exchange Specification (IGES) files were included on the tape.

5. SGML Analysis

No Standard Generalized Markup Language (SGML) files were included on this tape.

6. Raster Analysis

All four Raster images were checked using the AFCTN *validg4*. This utility reported errors in all files. The files were checked using various Raster tools available in the AFCTB. None of these utilities would display the images. On the UNIX based systems some files generated a core dump.

The error logs from validg4 are included in the Appendix to this report.

The Raster files do not meet the CALS MIL-R-28002A specification.

7. CGM Analysis

No Computer Graphics Metafile (CGM) files were included on this tape.

8. Conclusions and Recommendations

In summary, the tape from Cubic Defense Systems was not correct. It could not be read properly using the AFCTN *Tapetool* or XSoft *CAPS read1840A* software because of the numerous errors. The physical structure of the tape does not meet the CALS MIL-STD-1840A requirements.

The errors with the Raster images are serious. The construction of the Raster files appear to be flawed which resulted with unusable files. These unusable files were checked using several different Raster software tools. These errors should be researched and corrected before additional tapes are created and sent. The Raster files do not meet the CALS MIL-R-28002A specification.

The tape submitted by Cubic Defense Systems does not meet the CALS MIL-STD-1840A requirements.

9. Appendix A - Tapetool Report Logs

9.1 Tape Catalog

Air Force CALS Test Network Catalog Evaluation - Version 1.2; Release Number 8

```
  Standards referenced:
    MIL-STD-1840A (1987) - Automated Interchange of Technical Information
    ANSI X3.27 (1987) - File Structure and Labelling of Magnetic Tapes
                        for Information Interchange
    ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII
```

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MIL-STD-1840A File Catalog

File Set Directory: /cals/tapetool8/Set110

Page: 1

File Name	File Type	Record Format/ Length	Block Length/Total	Selected/ Extracted
D001	Document Declaration	D/00260	02048/000001	Selected
D001R001	Raster	F/00128	02048/000059	Extracted
D001R002	Raster	F/00128	02048/000024	Extracted
D001R003	Raster	F/00128	02048/000026	Extracted
D002R001	Raster	F/00128	02048/000020	Extracted

```
*** ERROR (MIL-STD-1840A; 5.1) - Unexpected Raster
    File encountered.
*** NOTE - Document Declaration Files should precede all other files.
*** ERPOR (MIL-STD-1840A; 5.1) - Document Declaration file D002 missing.
*** NOTE - Document Declaration files should precede all other files.
```

Catalog Process terminated with 2 error(s), 0 warning(s), and 2 note(s).

9.2 Tape Evaluation Log

```
Air Force CALS Test Network Tape Evaluation - Version 1.2; Release Number 8
  Standards referenced:
    ANSI X3.27 (1987) - File Structure and Labelling of Magnetic Tapes
                        for Information Interchange
    ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

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ANSI Tape Import Log

Allocating tape drive /dev/rmt0...

/dev/rmt0 allocated.

VOL1CALS01                                                              4

  Label Identifier: VOL1
  Volume Identifier: CALS01
  Volume Accessibility:
  Owner Identifier:
  Label Standard Version: 4

HDR1D001            CALS0100010001000000 92250 00000 000000

  Label Identifier: HDR1
  File Identifier: D001
  File Set Identifier: CALS01
  File Section Number: 0001
  File Sequence Number: 0001
  Generation Number: 0000
  Generation Version Number: 00
  Creation Date:  92250
  Expiration Date:  00000
  File Accessibility:
  Block Count: 000000
  Implementation Identifier:

HDR2D0204800260                                    00

  Label Identifier: HDR2
  Recording Format: D
  Block Length: 02048
  Record Length: 00260
  Offset Length: 00
```

```
************ Tape Mark ***************

  Actual Block Size Found = 2048 Bytes.

*** I/O ERROR - Invalid Record Control Word encountered.
    Record Control Word contained an invalid record length.
    Record Control Word string =>
*** NOTE - Remainder of file will be skipped.

  Number of data blocks read = 1.

************ Tape Mark ***************

EOF1D001            CALS0100010001000000 92199 00000 000001

  Label Identifier: EOF1
  File Identifier: D001
  File Set Identifier: CALS01
  File Section Number: 0001
  File Sequence Number: 0001
  Generation Number: 0000
  Generation Version Number: 00
  Creation Date:  92199
  Expiration Date:  00000
  File Accessibility:
  Block Count: 000001
  Implementation Identifier:

*** ERROR (ANSI X3.27; 8.8.1) - The contents of the fields in the
    EOF1 Label should equal the contents of the fields in the
    HDR1 Label (except for the Block Count field).

EOF2D0204800260                                    00

  Label Identifier: EOF2
  Recording Format: D
  Block Length: 02048
  Record Length: 00260
  Offset Length: 00

************ Tape Mark ***************

HDR1D001R001        CALS0100010001000000 92238 00000 000000

  Label Identifier: HDR1
  File Identifier: D001R001
```

```
  File Set Identifier: CALS01
  File Section Number: 0001
  File Sequence Number: 0001
  Generation Number: 0000
  Generation Version Number: 00
  Creation Date:  92238
  Expiration Date:  00000
  File Accessibility:
  Block Count: 000000
  Implementation Identifier:

*** ERROR (ANSI X3.27; 6.5.2) - Invalid file sequence number.
    File sequence numbers should increase by 1 for each file.
    Previous = 1; Expected = 2; Actual = 1

HDR2F0204800128                         B

  Label Identifier: HDR2
  Recording Format: F
  Block Length: 02048
  Record Length: 00128
  Offset Length:

************ Tape Mark ***************

  Actual Block Size Found = 2048 Bytes.

  Number of data blocks read = 59.

************ Tape Mark ***************

EOF1D001R001                                              000059

  Label Identifier: EOF1
  File Identifier: D001R001
  File Set Identifier:
  File Section Number:
  File Sequence Number:
  Generation Number:
  Generation Version Number:
  Creation Date:
  Expiration Date:
  File Accessibility:
  Block Count: 000059
  Implementation Identifier:

*** ERROR (ANSI X3.27; 8.8.1) - The contents of the fields in the
```

```
    EOF1 Label should equal the contents of the fields in the
    HDR1 Label (except for the Block Count field).

EOF2

  Label Identifier: EOF2
  Recording Format:
  Block Length:
  Record Length:
  Offset Length:

*** ERROR (ANSI X3.27; 8.8.2) - The contents of the fields in the
    EOF2 Label should equal the contents of the fields in the
    HDR2 Label.

************ Tape Mark ***************

HDR1D001R002          CALS0100010001000000 92238 00000 000000

  Label Identifier: HDR1
  File Identifier: D001R002
  File Set Identifier: CALS01
  File Section Number: 0001
  File Sequence Number: 0001
  Generation Number: 0000
  Generation Version Number: 00
  Creation Date:  92238
  Expiration Date:  00000
  File Accessibility:
  Block Count: 000000
  Implementation Identifier:

*** ERROR (ANSI X3.27; 6.5.2) - Invalid file sequence number.
    File sequence numbers should increase by 1 for each file.
    Previous = 2; Expected = 3; Actual = 1

HDR2F0204800128                       B

  Label Identifier: HDR2
  Recording Format: F
  Block Length: 02048
  Record Length: 00128
  Offset Length:

************ Tape Mark ***************

  Actual Block Size Found = 2048 Bytes.
```

```
  Number of data blocks read = 24.

************ Tape Mark ***************

EOF1D001R002                                                  000024

  Label Identifier: EOF1
  File Identifier: D001R002
  File Set Identifier:
  File Section Number:
  File Sequence Number:
  Generation Number:
  Generation Version Number:
  Creation Date:
  Expiration Date:
  File Accessibility:
  Block Count: 000024
  Implementation Identifier:

*** ERROR (ANSI X3.27; 8.8.1) - The contents of the fields in the
    EOF1 Label should equal the contents of the fields in the
    HDR1 Label (except for the Block Count field).

EOF2

  Label Identifier: EOF2
  Recording Format:
  Block Length:
  Record Length:
  Offset Length:

*** ERROR (ANSI X3.27; 8.8.2) - The contents of the fields in the
    EOF2 Label should equal the contents of the fields in the
    HDR2 Label.

************ Tape Mark ***************

HDR1D001R003          CALS0100010001000000 92238 00000 000000

  Label Identifier: HDR1
  File Identifier: D001R003
  File Set Identifier: CALS01
  File Section Number: 0001
  File Sequence Number: 0001
  Generation Number: 0000
  Generation Version Number: 00
```

```
  Creation Date:  92238
  Expiration Date:  00000
  File Accessibility:
  Block Count: 000000
  Implementation Identifier:

*** ERROR (ANSI X3.27; 6.5.2) - Invalid file sequence number.
    File sequence numbers should increase by 1 for each file.
    Previous = 3; Expected = 4; Actual = 1

HDR2F0204800128                          B

  Label Identifier: HDR2
  Recording Format: F
  Block Length: 02048
  Record Length: 00128
  Offset Length:

************ Tape Mark ***************

  Actual Block Size Found = 2048 Bytes.

  Number of data blocks read = 26.

************ Tape Mark ***************

EOF1D001R003                                              000026

  Label Identifier: EOF1
  File Identifier: D001R003
  File Set Identifier:
  File Section Number:
  File Sequence Number:
  Generation Number:
  Generation Version Number:
  Creation Date:
  Expiration Date:
  File Accessibility:
  Block Count: 000026
  Implementation Identifier:

*** ERROR (ANSI X3.27; 8.8.1) - The contents of the fields in the
    EOF1 Label should equal the contents of the fields in the
    HDR1 Label (except for the Block Count field).

EOF2
```

```
  Label Identifier: EOF2
  Recording Format:
  Block Length:
  Record Length:
  Offset Length:

*** ERROR (ANSI X3.27; 8.8.2) - The contents of the fields in the
    EOF2 Label should equal the contents of the fields in the
    HDR2 Label.

************ Tape Mark ***************

HDR1D002R001          CALS0100010001000000 92238 00000 000000

  Label Identifier: HDR1
  File Identifier: D002R001
  File Set Identifier: CALS01
  File Section Number: 0001
  File Sequence Number: 0001
  Generation Number: 0000
  Generation Version Number: 00
  Creation Date:  92238
  Expiration Date:  00000
  File Accessibility:
  Block Count: 000000
  Implementation Identifier:

*** ERROR (ANSI X3.27; 6.5.2) - Invalid file sequence number.
    File sequence numbers should increase by 1 for each file.
    Previous = 4; Expected = 5; Actual = 1

HDR2F0204800128                                    00

  Label Identifier: HDR2
  Recording Format: F
  Block Length: 02048
  Record Length: 00128
  Offset Length: 00

************ Tape Mark ***************

  Actual Block Size Found = 2048 Bytes.

  Number of data blocks read = 20.

************ Tape Mark ***************
```

```
EOF1D002R001          CALS0100010004000000 92199 00000 000020

  Label Identifier: EOF1
  File Identifier: D002R001
  File Set Identifier: CALS01
  File Section Number: 0001
  File Sequence Number: 0004
  Generation Number: 0000
  Generation Version Number: 00
  Creation Date:  92199
  Expiration Date:  00000
  File Accessibility:
  Block Count: 000020
  Implementation Identifier:

*** ERROR (ANSI X3.27; 8.8.1) - The contents of the fields in the
    EOF1 Label should equal the contents of the fields in the
    HDR1 Label (except for the Block Count field).

EOF2F0204800128                                    00

  Label Identifier: EOF2
  Recording Format: F
  Block Length: 02048
  Record Length: 00128
  Offset Length: 00

************ Tape Mark ***************

************ Tape Mark ***************

############ End of Volume CALS01 ###############

############ End Of Tape File Set ###############

Deallocating /dev/rmt0...

Tape Import Process terminated with 12 error(s), 0 warning(s),
and 1 note(s).
```

9.3 Tape File Set Validation Log

```
Air Force CALS Test Network File Set Evaluation - Version 1.2; Release Number 8
  Standards referenced:
    MIL-STD-1840A (1987) - Automated Interchange of Technical Information
    MIL-R-28002 (1989) - Raster Graphics Representation In Binary
                         Format, Requirements For

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MIL-STD-1840A File Set Evaluation Log

File Set: Set110

Found file: D001
Extracting Document Declaration Header Records...
*** ERROR (MIL-STD-1840A; 5.1.1.2) - The filcnt field could not be parsed.

Evaluating Document Declaration Header Records...

srcsys: CUBIC DEFENSE SYSTEMS INC. 9333 BALBOA AVE. SAN DIEGO, CA 92186     CAGE 94987
srcdocid: 129203
srcrelid: NONE
chglvl: B
*** ERROR (MIL-STD-1840A; 5.1.1.2) - Invalid change level encountered.
*** NOTE (MIL-STD-1840A; 5.1.1.2) - Change level should be the word ORIGINAL or
    a Revision Number followed by a Change Level Number followed by
    a Change Level Date. They should be separated by a comma or space.
dteisu: SEE DWG
*** ERROR (MIL-STD-1840A; 5.1.1.2) - Invalid date format encountered.
*** NOTE (MIL-STD-1840A; 5.1.1.2) - Date Format shall be a four digit year
    followed by a two digit month followed by a two digit day.
dstsys: YIEC OO-ALC
dstdocid: NONE
dstrelid: NONE
dtetrn: 19920717
dlvacc: A011R,E010R0
ilcnt: R30
*** ERROR (MIL-STD-1840A; 5.1.1.2) - Invalid Document Declaration header;
    field name.  Expected => filcnt:
*** NOTE - The value in the header field may not be evaluated.
*** NOTE - Correction made in new %s Header File.
tlcls: UNCLASSO
*** ERROR (MIL-STD-1840A; 5.1.1.2) - Invalid Document Declaration header;
    field name.  Expected => ttlcls:
*** NOTE - The value in the header field may not be evaluated.
```

```
*** NOTE - Correction made in new %s Header File.
occls: UNCLASS0
*** ERROR (MIL-STD-1840A; 5.1.1.2) - Invalid Document Declaration header;
    field name.  Expected => doccls:
*** NOTE - The value in the header field may not be evaluated.
*** NOTE - Correction made in new %s Header File.
octyp: DL0
*** ERROR (MIL-STD-1840A; 5.1.1.2) - Invalid Document Declaration header;
    field name.  Expected => doctyp:
*** NOTE - The value in the header field may not be evaluated.
*** NOTE - Correction made in new %s Header File.
octtl: AIRCRAFT INSTRUMENTATION SUBSYSTEM
*** ERROR (MIL-STD-1840A; 5.1.1.2) - Invalid Document Declaration header;
    field name.  Expected => docttl:
*** NOTE - The value in the header field may not be evaluated.
*** NOTE - Correction made in new %s Header File.

7 error(s), 0 warning(s), and 12 note(s) were encountered
in Document Declaration File D001.


Found file: D001R001
Extracting Raster Header Records...
Evaluating Raster Header Records...

srcdocid:   247820         94987                00010001UMEEHN
*** ERROR (MIL-STD-1840A; 5.1.4) - Value contains leading spaces.
*** NOTE - Correction made in new %s Header File.
dstdocid: NONE
txtfilid: NONE
figid: NONE
srcgph: NONE
doccls: NONE
rtype: 1
rorient: 000,270
rpelcnt: 26880,6912
*** ERROR (MIL-STD-1840A; 5.1.4.4) - Value for pel path pels was not a
    zero-filled six character number.
*** ERROR (MIL-STD-1840A; 5.1.4.4) - Value for progression lines was not a
    zero-filled six character number.
*** NOTE - The header record will be given the value 026880,006912.
*** NOTE - Correction made in new %s Header File.
rdensty: 200
*** ERROR (MIL-STD-1840A; 5.1.4.4) - Value for Raster density was not a
    zero-filled four character number.
*** NOTE - The header record will be given the value 0200.
*** NOTE - Correction made in new %s Header File.
```

```
notes: NONE

4 error(s), 0 warning(s), and 5 note(s) were encountered
 in Raster File D001R001.
Saving Raster Header File: D001R001_HDR
Saving Raster Data File: D001R001_GR4

Found file: D001R002
Extracting Raster Header Records...
Evaluating Raster Header Records...

srcdocid:   247820         94987                 00010001UMEEHN
*** ERROR (MIL-STD-1840A; 5.1.4) - Value contains leading spaces.
*** NOTE - Correction made in new %s Header File.
dstdocid: NONE
txtfilid: NONE
figid: NONE
srcgph: NONE
doccls: NONE
rtype: 1
rorient: 000,270
rpelcnt: 8960,6912
*** ERROR (MIL-STD-1840A; 5.1.4.4) - Value for pel path pels was not a
    zero-filled six character number.
*** ERROR (MIL-STD-1840A; 5.1.4.4) - Value for progression lines was not a
    zero-filled six character number.
*** NOTE - The header record will be given the value 008960,006912.
*** NOTE - Correction made in new %s Header File.
rdensty: 200
*** ERROR (MIL-STD-1840A; 5.1.4.4) - Value for Raster density was not a
    zero-filled four character number.
*** NOTE - The header record will be given the value 0200.
*** NOTE - Correction made in new %s Header File.
notes: NONE

4 error(s), 0 warning(s), and 5 note(s) were encountered
 in Raster File D001R002.
Saving Raster Header File: D001R002_HDR
Saving Raster Data File: D001R002_GR4

Found file: D001R003
Extracting Raster Header Records...
Evaluating Raster Header Records...

srcdocid:   247820         94987                 00010001UMEEHN
*** ERROR (MIL-STD-1840A; 5.1.4) - Value contains leading spaces.
*** NOTE - Correction made in new %s Header File.
```

```
dstdocid: NONE
txtfilid: NONE
figid: NONE
srcgph: NONE
doccls: NONE
rtype: 1
rorient: 000,270
rpelcnt: 8960,6912
*** ERROR (MIL-STD-1840A; 5.1.4.4) - Value for pel path pels was not a
    zero-filled six character number.
*** ERROR (MIL-STD-1840A; 5.1.4.4) - Value for progression lines was not a
    zero-filled six character number.
*** NOTE - The header record will be given the value 008960,006912.
*** NOTE - Correction made in new %s Header File.
rdensty: 200
*** ERROR (MIL-STD-1840A; 5.1.4.4) - Value for Raster density was not a
    zero-filled four character number.
*** NOTE - The header record will be given the value 0200.
*** NOTE - Correction made in new %s Header File.
notes: NONE

4 error(s), 0 warning(s), and 5 note(s) were encountered
 in Raster File D001R003.
Saving Raster Header File: D001R003_HDR
Saving Raster Data File: D001R003_GR4

Evaluating numbering scheme...
No errors were encountered during numbering scheme evaluation.
Numbering scheme evaluation complete.

Checking file count...
*** ERROR (MIL-STD-1840A; 5.1.1.2) - The filcnt field could not be parsed.
*** NOTE - Correction made in new Document Declaration header file.
1 error(s) were encountered during file count verification.
File Count verification complete.

A total of 20 error(s), 0 warning(s), and 27 note(s) were
encountered in Document D001.

A grand total of 20 error(s), 0 warning(s), and 27 note(s) were
encountered in this File Set.

MIL-STD-1840A File Set Evaluation Complete.
```

9.4 XSoft CAPS read1840A Logs

```
/cals/caps/Bin/read1840A: --- Read declaration file 'D001     ' ---
/cals/caps/Bin/read1840A: file error: expected 'filcnt...', saw 'ilcnt: R30
'
```

10. Appendix B - Detail Raster Analysis

10.1 File D001R001

10.1.1 Error Log validg4

```
 density      = 200
 path length  = 26880
 scan lines   = 6912
 bit format   = MSB

error getcode, no match in 12 bits
s=437 word=310 pos=180

file = d001r001
```

10.2 File D001R002

10.2.1 validg4 Log

```
 density      = 200
 path length  = 8960
 scan lines   = 6912
 bit format   = MSB

error, scan length exceeds pel count
s=452 a0=0 bstop=8961 pos=162

file = d001r002
```

10.3 File D001R003

10.3.1 validg4 Log

```
 density      = 200
 path length  = 8960
 scan lines   = 6912
 bit format   = MSB

error, scan length exceeds pel count
s=452 a0=0 bstop=8961 pos=162

file = d001r003
```

10.4 File D002R001

10.4.1 validg4 Log

```
 density      = 200
 path length = 4608
 scan lines   = 3584
 bit format   = MSB

error, scan length exceeds pel count
s=455 a0=0 bstop=4639 pos=421

file = d002r001
```